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ABSTRACT

A mini-course was devised to aid physical education majors in modifying personal problem behaviors that could directly or indirectly have an impact on their teacher behavior. Relevant readings on the topics of behavior control and self-modification were provided. The subjects designed self-modification projects that involved the self-application of personally selected behavioral techniques after identifying specific goals. Emphasis was placed on teaching the participants broad-based behavior analysis skills that they could apply to a variety of problems. A table is included in this paper illustrating target behaviors selected, success in achieving goals, and participants' satisfaction with results. (JD)

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BEHAVIORAL SELF-MODIFICATION IN TEACHER EDUCATION

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Behavioral self-modification, as the term implies, involves the self-application of behavior principles to affect change in one's own behavior. This approach to behavior change not only has the potential effect of accelerating the change process; it also provides an opportunity for the person to be the significant change agent thereby fostering increased feelings of self-reliance and self-respect.

REVIEW OF LITERATURE

The self-application of behavior principles to regulate one's own behavior in educational settings has not been well documented. Despite the paucity of research in this area, there are studies which have examined self-modification techniques in therapeutic environments. The prearrangement of stimulus cues by the individual was one of the first self-modification approaches examined. Stuart (18) reported unprecedented degrees of success when obese subjects applied stimulus control to their own behavior by altering undesirable antecedent stimuli. Additional studies have substantiated the effectiveness of this self-change technique (14, 15, 17).

Another major self-modification strategy which has empirical support is known as "behavioral programming" (11). This technique involves the use of self-imposed contingencies to modify one's own behavior. Several studies have demonstrated the efficacy of self-administered reinforcement (1, 7, 8, 10, 12).

Certain undesirable behaviors appear to be highly correlated with identifiable thoughts and/or emotional responses (19). Covert self-modification strategies are employed to alter both overt and other covert behaviors (thoughts and feelings). Several investigations have illustrated the effectiveness of self-applied covert techniques (2, 5, 6, 13).

When self-modification is studied as a total process in naturalistic settings, rarely does it involve a single strategy. Several studies have demonstrated the usefulness of comprehensive self-modification programs involving several behavior techniques applied simultaneously (3, 4, 16).

The studies reviewed in this paper focused on the "treatment" of specific problems. The present investigation, however, focused on training rather than treatment. The emphasis was placed on teaching individuals strategies for understanding and controlling a wide variety of their own behaviors. This was accomplished via a self-instructional modularized mini-course in behavioral self-modification. It was not only a course <u>about</u> behavioral self-modification--it was an <u>experience</u> in behavioral self-modification.

METHODS AND PROCEDURES

Subjects

The subjects in this study consisted of fifteen sophomore physical education majors at The Ohio State University who expressed a desire to learn self-modification techniques.

Modularized Mini-Course

The modularized mini-course was structured so that students would: (a) increase their understanding of the factors that impinge upon their behavior; (b) apply specific principles of behavior modification to their own lives by developing and implementing personal self-change programs as part of the course; and (c) learn broad-based survival skills which are generalizable to a wide variety of behaviors.

The first objective was accomplished via a package of materials which contained relevant readings on the topics of behavior control and self-modification. The instructional package also contained enabling activities designed to evaluate the students' abilities to handle the concepts effectively. Students completed this portion of the course during the first three weeks of the quarter.

The second, and major, portion of the course involved a personal self-modification project. Students were instructed to select and focus upon personal problem behaviors which could directly or indirectly impact on their teaching behavior. With the assistance of the investigator, the subjects designed self-modification projects which involved the self-application of several behavioral techniques. The specific techniques developed and carried out by class members included identifying specific target behaviors, setting goals, self-monitoring, and implementing a packaged intervention. Terminal behavioral objectives were stated in terms of a percent increase or decrease over the baseline rate which was established during a one- to two-week baseline period. Following the collection of baseline data, they instituted the packaged intervention which consisted of: (a) altering antecedent stimuli (setting events); (b) establishing effective behavioral consequences; (c) focusing on behavioral contingencies; and (d) applying covert self-control techniques to their behavior (19).

Analysis and Experimental Design

The purpose of this investigation was to train a group of individuals in empirically-based procedures for managing their own behavior. Because the primary emphasis in this study was the individual, rather than the group, within-subject or single organism designs were used to analyze the data (9). With the use of these designs, data are not subjected to statistical analysis. Rather, causality is demonstrated when behavior changes consistently and predictably with changing contingencies. Each subject's data were analyzed via one of the three single organism designs. A multiple baseline design (9) was used with subjects who chose to modify the same behaviors(s). With subjects who chose to modify behaviors which required gradual shaping over a period of time, a changing criterion design (9) was used to analyze the data. The third type of experimental design used was an ABA reversal design (9). During

A, baseline data are collected and recorded, followed by B, the intervention. Removal of the intervention contingencies, C, should result in a return to baseline rates. Significance in applied behavioral research is not based on an alpha level or probability. A more important concept of significance in intensive studies involving self-modification is the personal and social usefulness of changes realized. Subjects in this study established terminal goals which enabled them to evaluate the significance of the changes they noted. Changes were regarded as significant by the investigator if they matched or exceeded the terminal objectives set by the subjects.

RESULTS

Table 1 provides descriptive information on each of the self-modification projects conducted. The mean changes over baseline were calculated from the students' self-monitored data and expressed as percentages. Students' satisfaction with the outcomes of their projects is also provided. An examination of Table 1 reveals that 10 of the 15 subjects achieved their terminal levels of behavior, while the remaining five were more than 75 percent successful in thie regard.

Each of the 15 subjects completed an evaluative questionnaire at the completion of the self-modification projects. This was administered for the purpose of analyzing various aspects of the course and the self-modification projects. In general, all subjects felt that the changes they realized were of practical significance to them personally. As a result of their achievements, 13 of the subjects reported that they regard themselves as being more in control of their own behavior than they did prior to the course. Fourteen subjects felt very confident that they could design and implement another self-modification project involving another behavior problem. This statement is highly significant because one of the purposes of the course was to teach the subjects broad-based behavior analysis skills which they could apply to a variety of problems.

DISCUSSION

Since self-modification skills are potentially generalizable, they offer the prospective teacher a useful tool for alleviating both existing and future behavior problems related to teaching, family, personal habit/health, and social/interpersonal relationships. The inclusion of such a course in the preparation of teachers, especially physical education teachers who are highly visible models for the students with whom they come into contact, appears to warrant consideration.

TABLE 1
SELF-MODIFICATION PROJECTS AND OUTCOMES

SUBJECTS	TARGET BEHAVIORS	BEHAVIORAL GOALS	PERCENT CHANGE OVER BASELINE	SELF-SATISFACTION WITH CHANGE
1	Eliminate Fingernail Biting	Decrease by 100%	94% Decrease	Yes
2	Eliminate Smoking	Decrease by 100%	100% Decrease	Yes
3	Improve Self-Concept			
	a. Decrease Self-Criticism	Decrease by 50%	35% Decrease	Somewhat
	b. Increase Self-Praise	Increase by 50%	36% Increase	Somewhat
4	Improve Self-Concept			
	a. Decrease Self-Criticism	Decrease by 50%	53% Decrease	Yes
	b. Increase Self-Praise	Increase by 50%	27% Increase	No
5	Improve Eating Habits			
	a. Decrease Junk Food	Decrease by 50%	81% Decrease	Yes
	b. Increase Appropriate Food	Increase by 50%	30% Increase	Somewhat
	c. Decrease Caloric Intake	Decrease by 33%	59% Decrease	Yes
6	Improve Eating Habits			
	a. Decrease Junk Food	Decrease by 50%	95% Decrease	Yes
	b. Increase Appropriate Food	Increase by 50%	83% Increase	Yes
	c. Decrease Caloric Intake	Decrease by 33%	45% Decrease	Yes
7	Decrease Caloric Intake	Decrease by 33%	34% Decrease	Somewhat
8	Decrease Caloric Intake	Decrease by 33%	31% Decrease	Yes
9	Increase Study Time	Increase by 100%	147% Increase	Yes
10	Increase Study Time	Increase by 100%	155% Increase	Yes
11	Increase Study Time	Increase by 100%	179% Increase	Yes
12	Increase Study Time	Increase by 100%	226% Increase	Yes
13	Increase Study Time	Increase by 100%	156% Increase	Yes
14	Increase Study Time	Increase by 100%	104% Increase	Yes
15	Increase Study Time	Increase by 100%	169% Increase	Yes

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